

Fig. 1

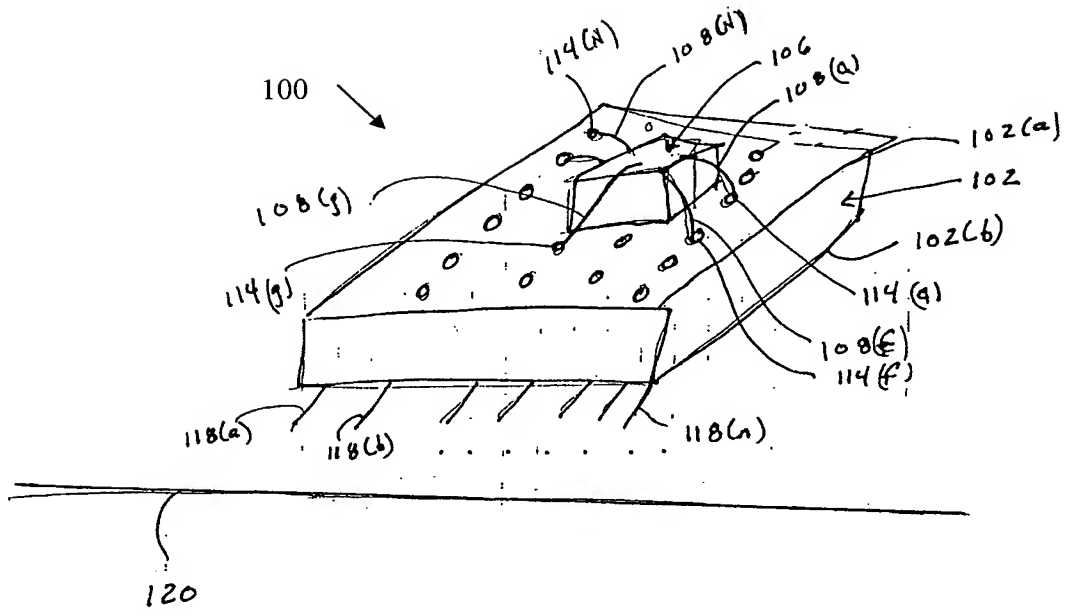


Fig. 2

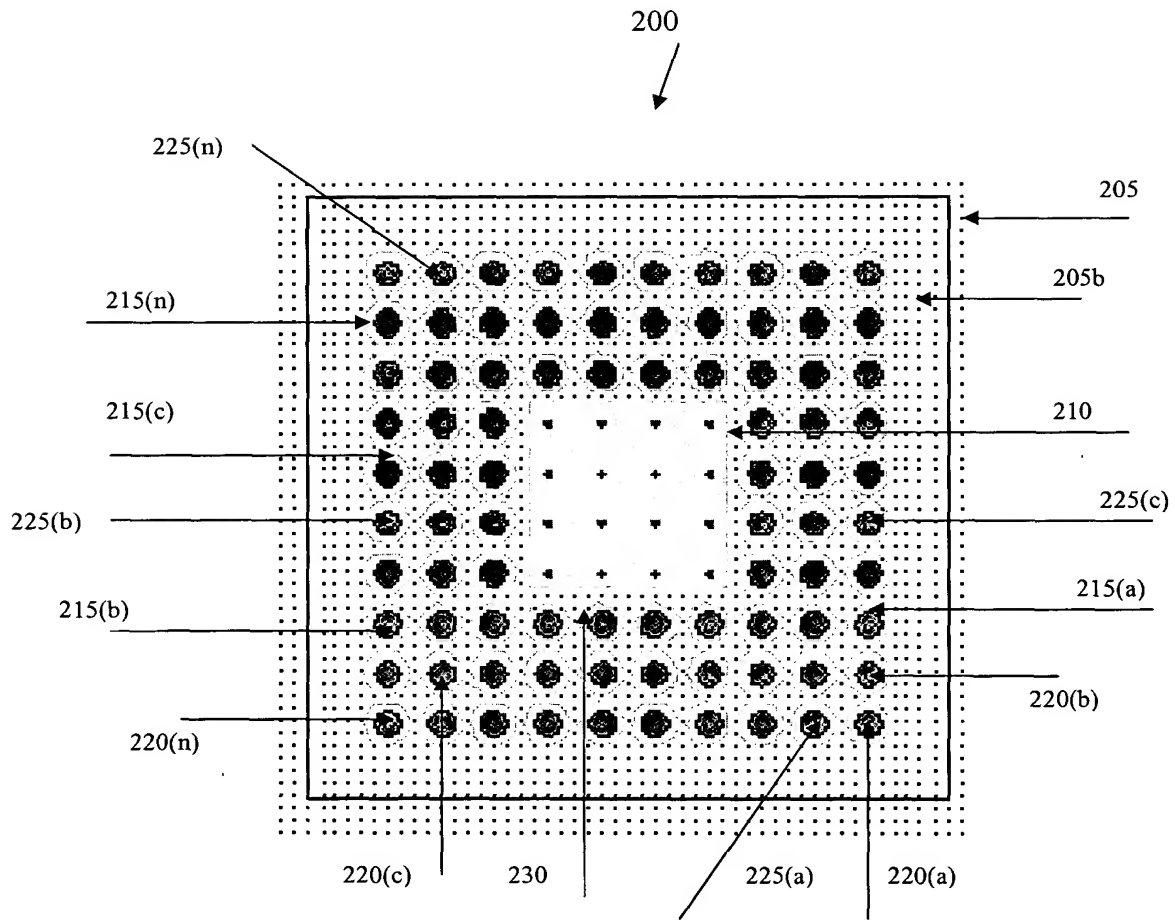


Fig. 3(a)

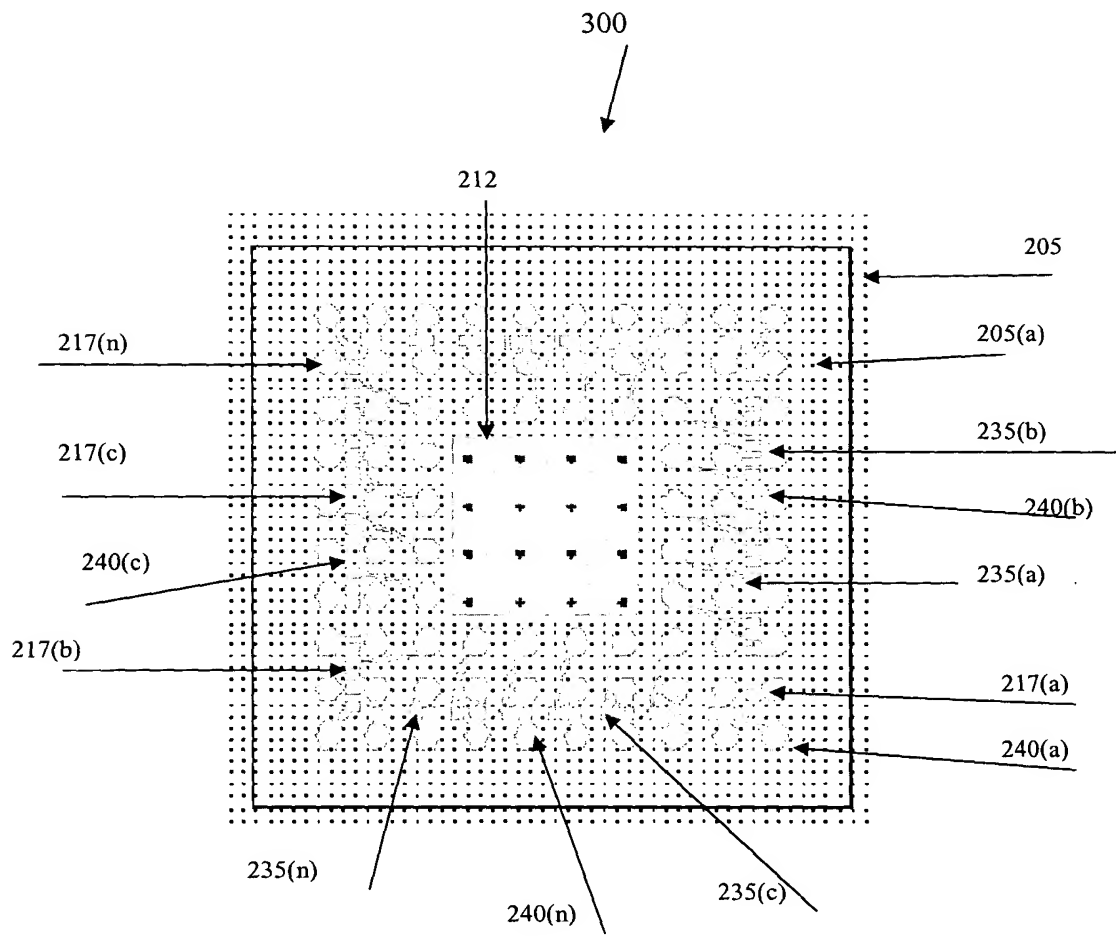


Fig. 3(b)

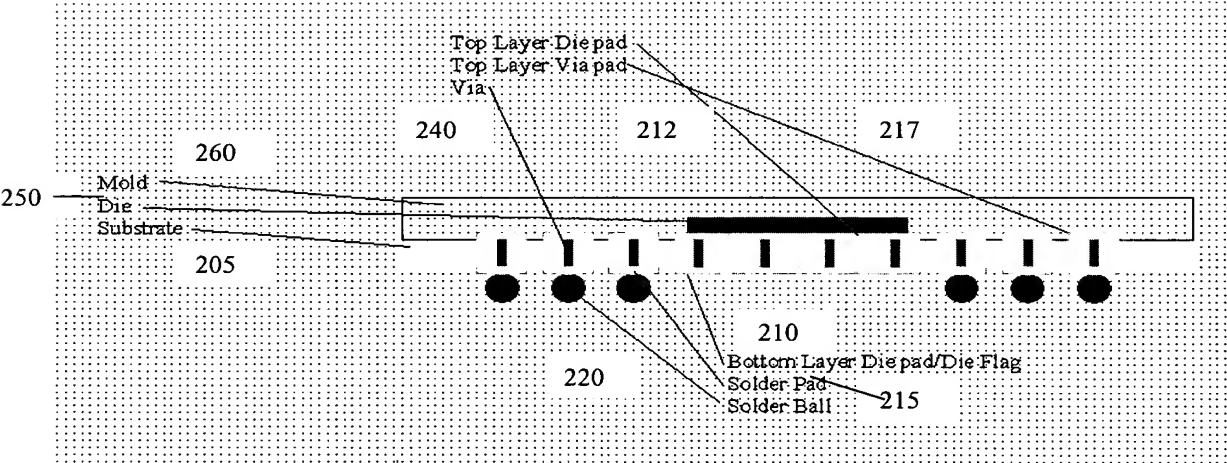


Fig. 4

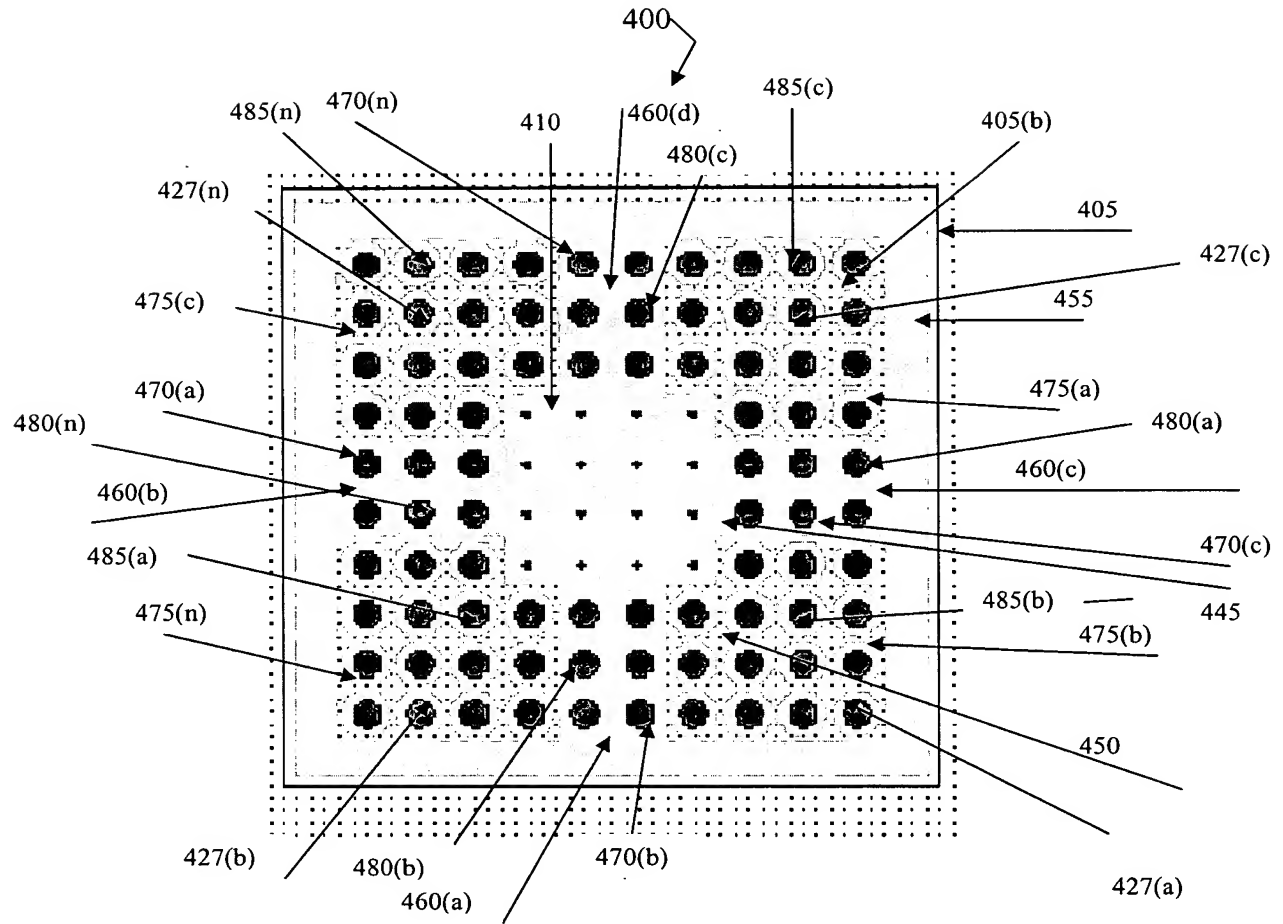


Fig. 5

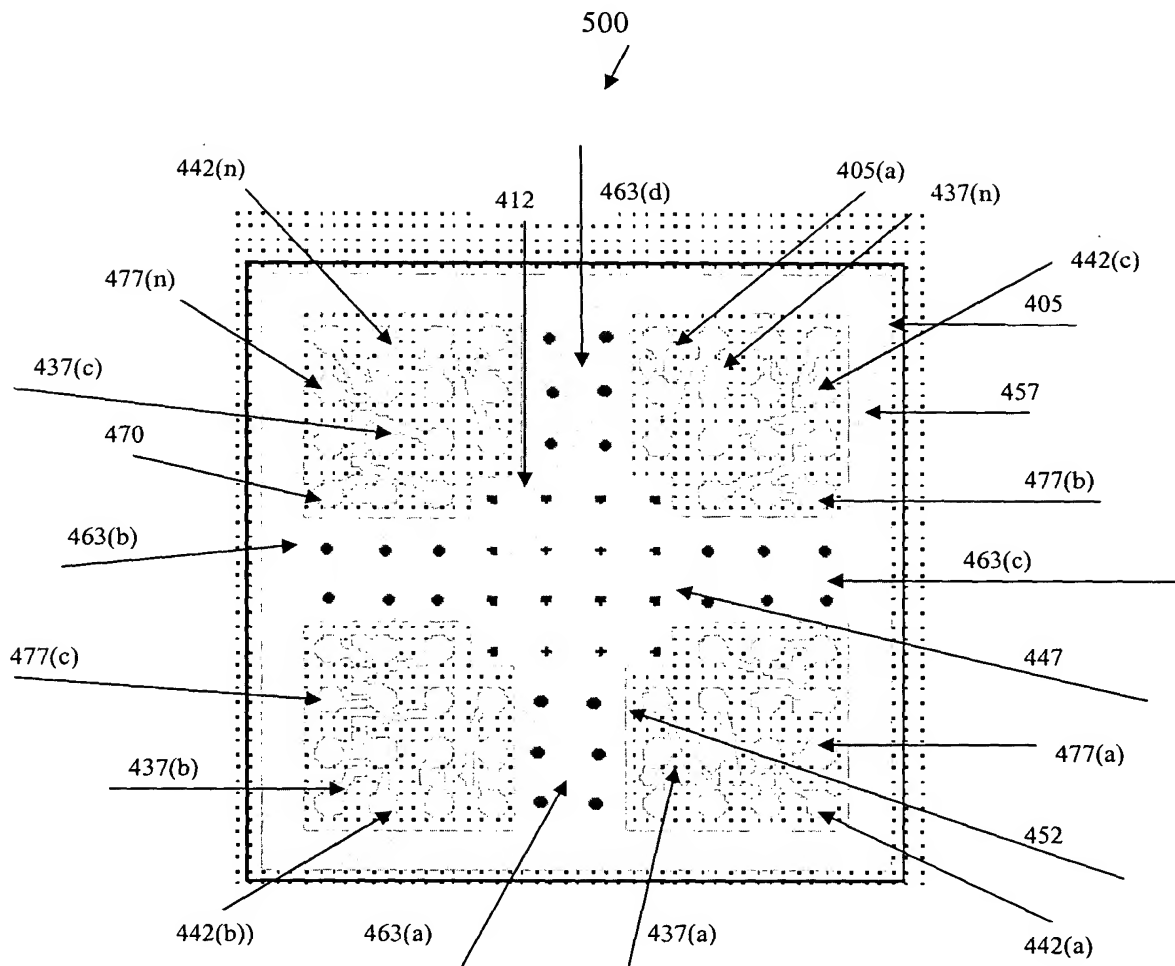


Fig. 6

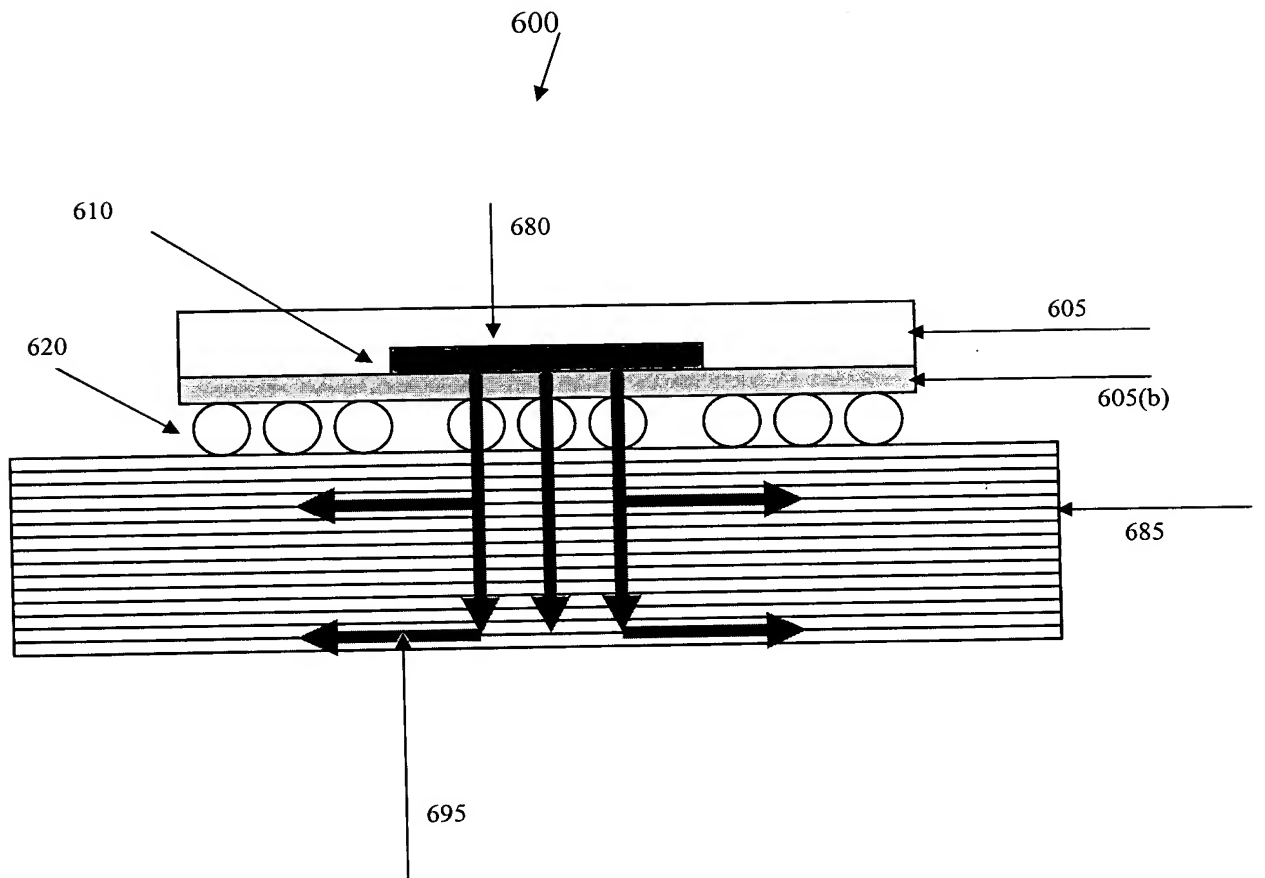


Fig. 7

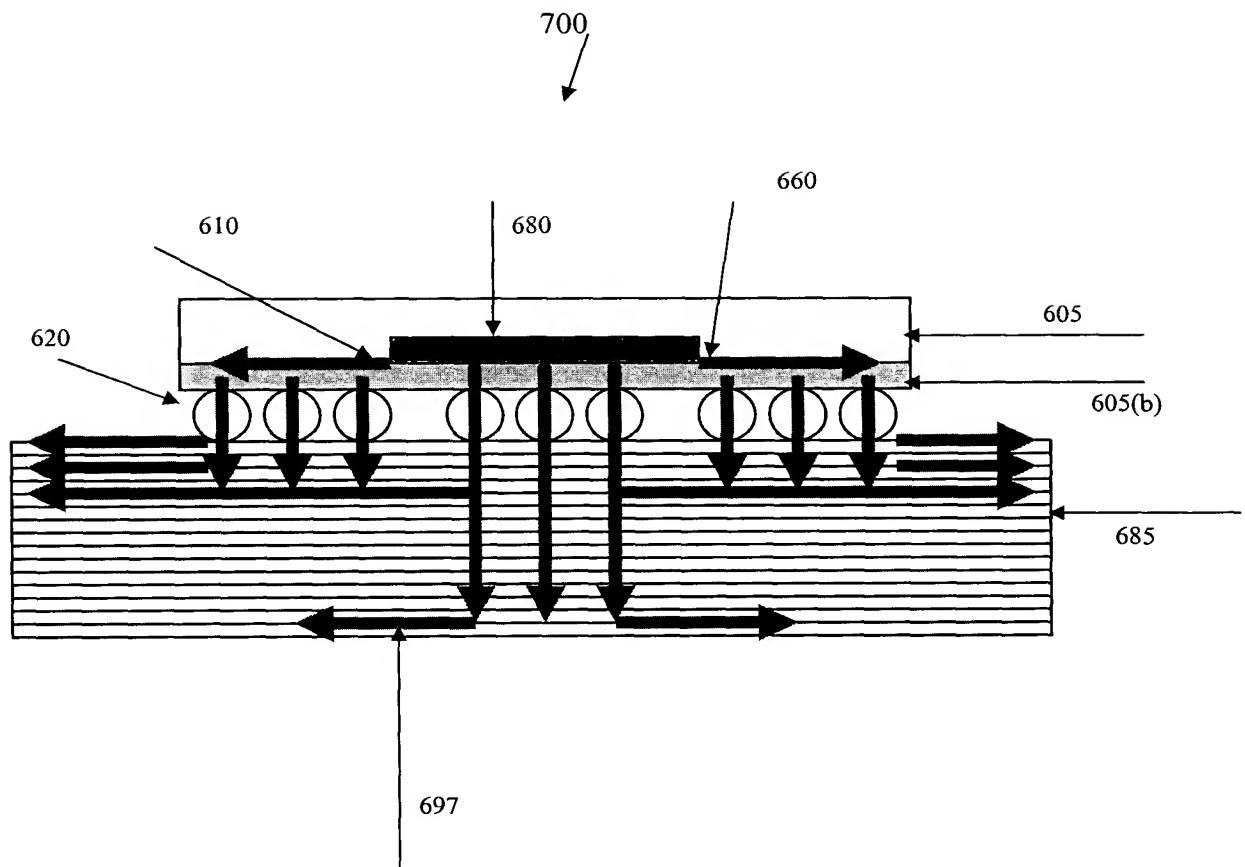




Fig. 8

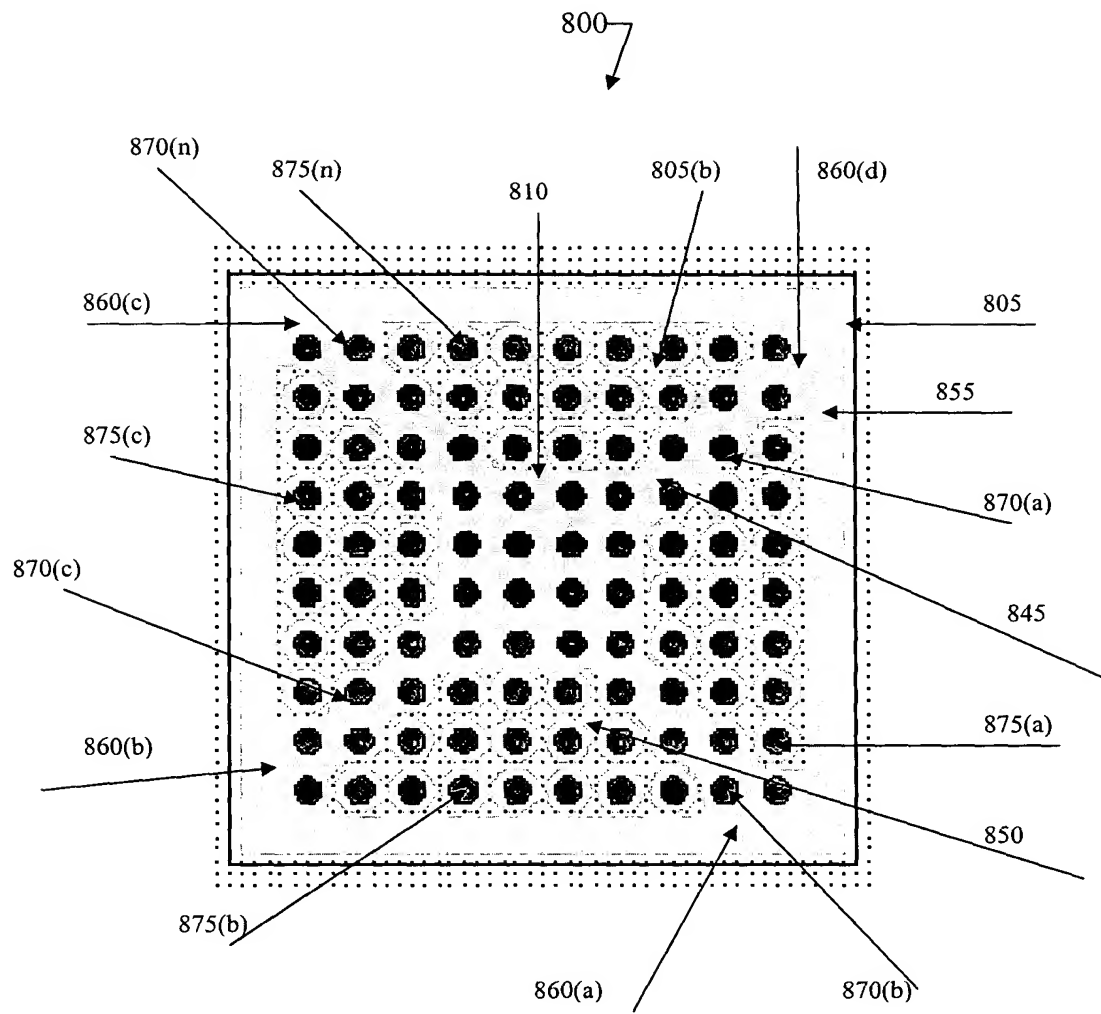


Fig. 9

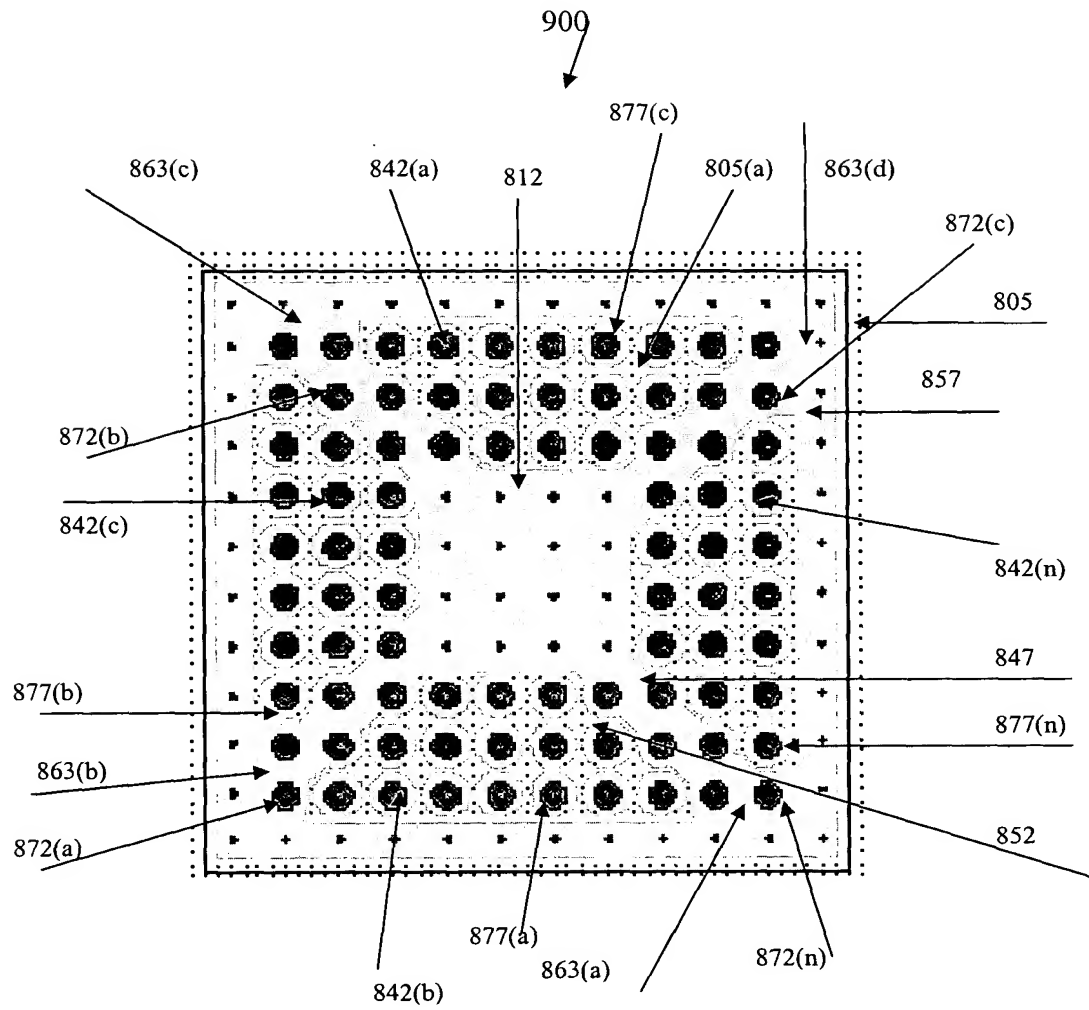
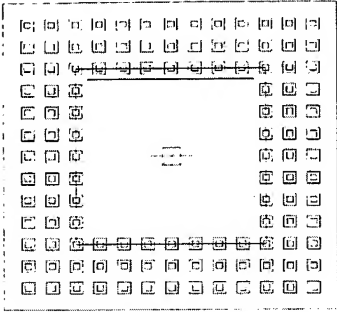
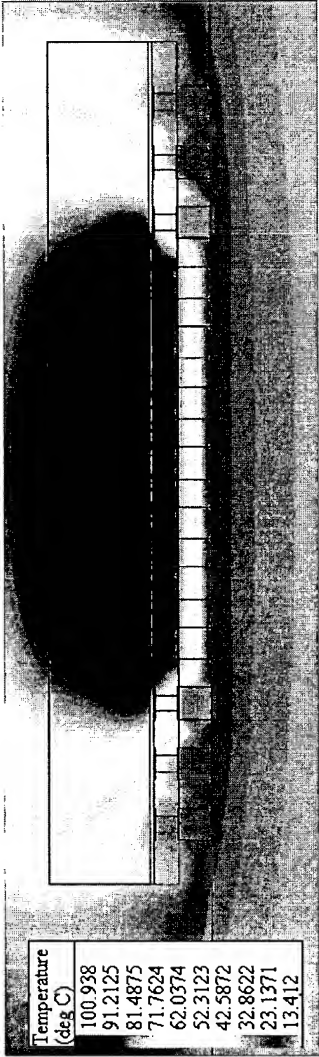


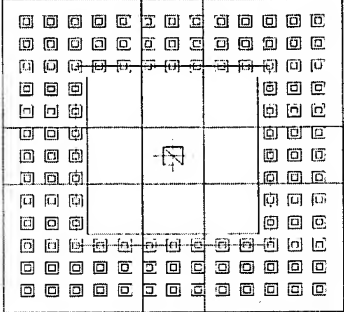
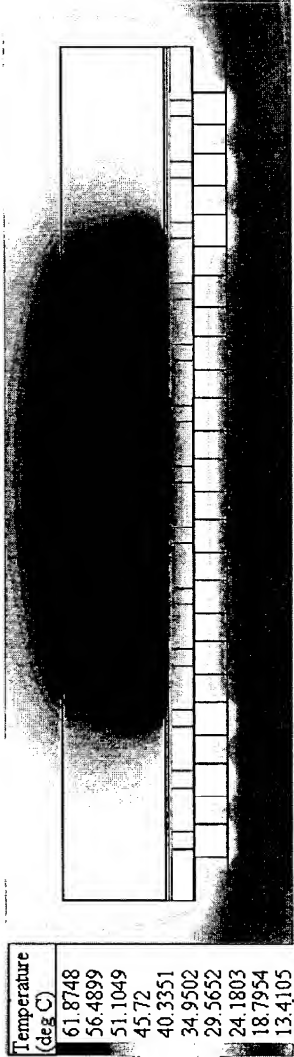
Fig. 10

**Thermal Bar Substrate Simulation case**

PWB cooling principle (no thermal ball option), normal: 



PWB cooling principle (no thermal ball option), TB:



~ 40 % thermal performance decrease in package level